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ABSTRACT

2 A liner hanger having a mechanical coupling between a liner hanger body and one
3 or more cones is disclosed. The cones are coupled to the liner hanger body to resist axial
4 and relative rotational movement without welding the cones to the hanger body, and
5 without the need to use integral cones. In general, the mechanical coupling includes a
6 hanger body or casing mandrel, a cone assembly journaled on the casing mandrel, at least
7 one slot or groove in an outer wall of the casing mandrel, and at least one partially or
8 fully annular slot on the inside surface of the cone assembly oriented to correspond with
9 the groove(s) in the outer wall of the hanger body. At least one wire, or one or more
10 bearings, is situated in the corresponding slot and the groove. The wire engages the
11 flanks of the slot and groove sufficiently to resist axial or rotational movement of the
12 cones relative to the hanger body.

2009-07-22 09:02:02